REMARKS

As a preliminary matter, with regard to the drawings, Applicants have included herewith a marked-up copy of Figure 3E, with the proposed changes in red. The dual inclusion of reference number 115 has been corrected by changing it to reference numbers 115A and 115B, which is consistent with Figures 3C, 3D, 3F and 3G. Approval of the proposed drawing changes is respectfully requested. With regard to the objection to Figure 3G, which was objected to because reference number 144 was not mentioned in the specification, the specification has been amended to include mention of this reference number. More specifically, line 8 of page 12 has been amended to refer to "Ar ions 144." Accordingly, in light of the corrections mentioned above, withdrawal of the Examiner's objections to the drawings is respectfully requested.

The title of the invention has been amended by removing the mention of the fabrication process, which is no longer being claimed. Accordingly, withdrawal of the Examiner's objection to the title of the invention is respectfully requested.

Claims 1-4, 6, 7, 13-16, 18 and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 6,185,078 to Lin et al. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the Lin et al. reference fails to disclose or suggest all of the features of the present invention. More specifically, the Lin et al. reference fails to disclose or suggest a magneto-resistive magnetic sensor that includes, *inter alia*, a "pair of domain-controlling magnetic regions having a coercive force exceeding a coercive

force of a ferromagnetic layer used in said magneto-resistive structure as a free layer," as defined in independent Claim 1, as amended. Please note that support for this portion of the amendment to Claim 1 can be found in the specification on page 10, lines 20-29, which states that the domain control regions 115A and 115B are formed of CoCrPt, while the free layer 103 is formed of a NiFe alloy (page 8, line 37). Domain control layers of CoCrPt will inherently have a coercive force that is greater than that of a free layer formed of an NiFe alloy.

In contrast to the present invention, as defined in Claim 1, the layers of the Lin et al. reference most closely corresponding to the claimed magnetic regions and the free layer are formed of the same composition, and therefore would have the same coercive force. More specifically, regions 450 (of Figure 17), which most closely correspond to the claimed magnetic region, are formed of an Ni-Fe (5.6) alloy (column 11, line 51), and free layer 432, which most closely corresponds to the claimed free layer, is also formed of the same Ni-Fe(5.6) alloy (column 11, line 40). Thus, since regions 450 and free layer 432 are both made of the same composition, they both have the same coercive force. Accordingly, regions 450 do not a coercive force exceeding the coercive force of free layer 432, so regions 450 cannot be considered as the claimed magnetic regions. Moreover, in the Lin et al. reference, regions 450 do not function as the claimed "domain-controlling" magnetic regions because they have the same coercive force as the free layer 432. Thus, for both of these reasons, Applicants respectfully request the withdrawal of this §102(e) rejection of Claim 1 under the Lin et al. reference.

Additionally, Applicants also respectfully request the withdrawal of the §102(e) rejection of independent Claims 1 and 13 because the Lin et al. reference fails to disclose a magneto-resistive magnetic sensor that includes, *inter alia*, an "oxidation-resistant conductive layer having a substantially uniform thickness." One example of an oxidation-resistant conductive layer of the present invention is represented by layer 110 of Figures 3A-3H, which clearly shows a layer of substantially uniform thickness.

In contrast, the Examiner has equated layer 256 of Figure 11 of the Lin et al. reference with the claimed "oxidation-resistant layer." However, as can be seen in Figure 11 of Lin et al., layer 256 is not of a "substantially uniform thickness." Accordingly for this reason also, Applicants respectfully request the withdrawal of the §102(e) rejection of independent Claims 1 and 13.

Claims 2-4, 6, 7, 14-16, 18 and 19 all depend from either independent Claim 1 or from independent Claim 13, and therefore include all of the features of either Claim 1 or Claim 13, plus additional features. Accordingly, Applicants respectfully request that the §102(e) rejection of dependent Claims 2-4, 6, 7, 14-16, 18 and 19 under the Lin et al. reference be withdrawn considering the above remarks directed to independent Claims 1 and 13.

Claims 5 and 17 stand rejected under 35 U.S.C. §103 as being unpatentable over the Lin et al. reference. Applicants respectfully traverse this rejection.

Claims 5 and 17 depend from either independent Claim 1 or from independent Claim 13, and therefore include all of the features of either Claim 1 or Claim 13, plus

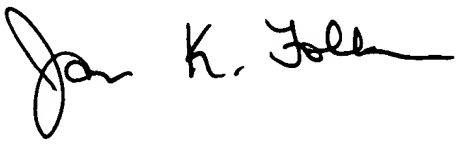
additional features. Accordingly, Applicants respectfully request that the §103 rejection of dependent Claims 5 and 13 under the Lin et al. reference be withdrawn considering the above remarks directed to independent Claims 1 and 13, and also because the Lin et al. reference does not suggest the modifications required to satisfy the claims, as amended.

Applicants have also added new Claims 20-22. Applicants submit that new Claims 20-22 are also allowable over the art of record.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 

James K. Folker
Registration No. 37,538

March 9, 2004

Suite 2500
300 South Wacker Drive
Chicago, Illinois 60606
(312) 360-0080

Customer No. 24978
P:\DOCS\0941\65074\463445.DOC

Do Not Print

FIG. 3E

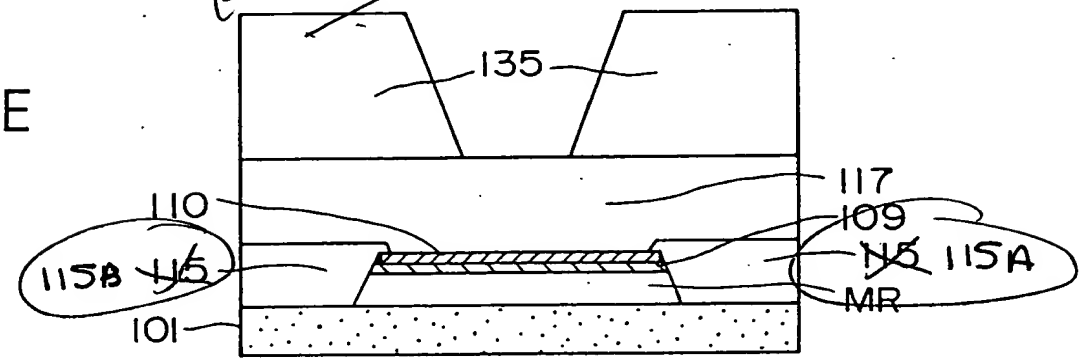
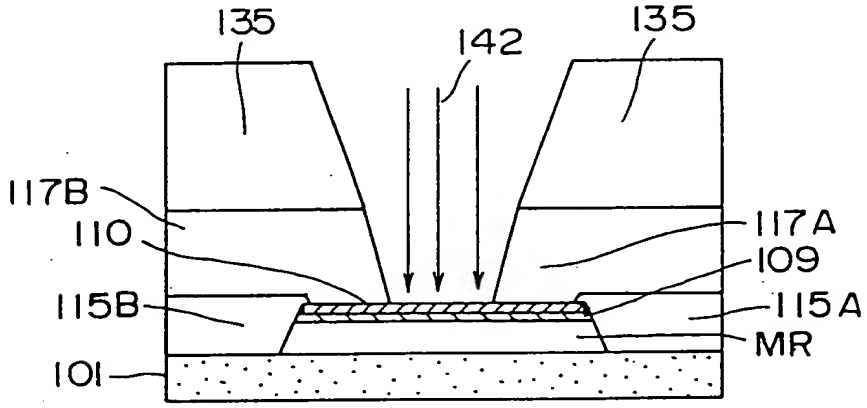
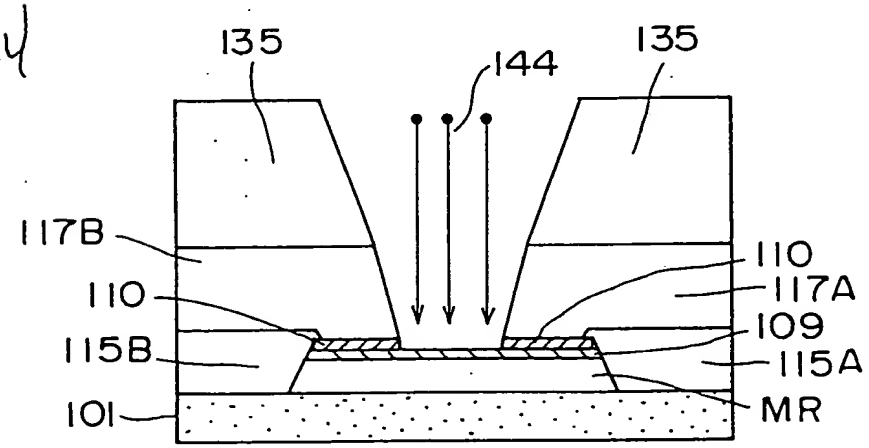


FIG. 3F



Approved
CR 3-18-04

FIG. 3G



Do Not Print !

FIG. 3E

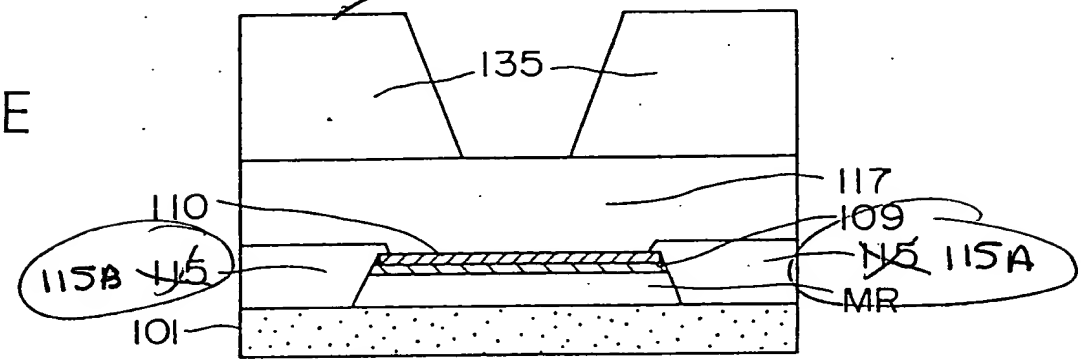
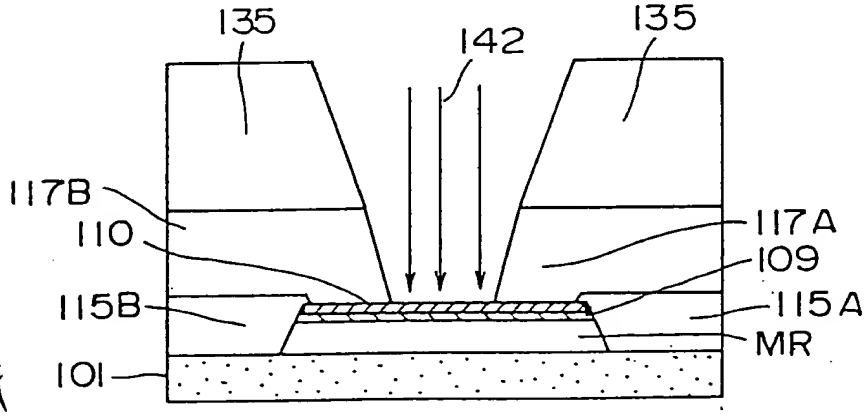


FIG. 3F



Approved !
CAH 3-8-04

FIG. 3G